UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,688	01/24/2002	Eric Gregory Oettinger	TI-33552	1034

23494 7590 03/08/2006

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER	
BELLO, AGUSTIN	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/056,688	OETTINGER ET AL.	
	Examiner	Art Unit	
	Agustin Bello	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13 and 15-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 15-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/9/06 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13 and 15-18 and are rejected under 35 U.S.C. 103(a) as being unpatentable over Gfeller (U.S. Patent No. 4,402,090) in view of Solinsky (U.S. Patent No. 5,142,400).

Regarding claim 1, Gfeller teaches receiving a light beam at the photodetector (reference numeral 48 in Figure 7), demodulating data carried on the received light beam (reference numeral 49 in Figure 7); parsing the demodulated data (reference numeral 53 in Figure 7); determining an origin of the demodulated data based on the parse (reference numeral 51 in Figure 7); and permitting signal lock if the origin of the received light beam is different from the optical wireless link containing the photodetector (column 6 line 64 – column 7 line 25). Gfeller differs from the claimed invention in that Gfeller fails to specifically teach providing a steerable

light beam transmitter and that the wireless optical link is prevented from locking on to a reflected light beam originating from its steerable light beam transmitter. However, Solinsky, in the same field of satellite communication, teaches that steerable light beam transmitters are well known in the art (reference numeral 12a in Figure 1) and further that the wireless optical link is prevented from locking on to a reflected light beam originating from its steerable light beam transmitter (column 8 lines 1-52). One skilled in the art would have been motivated to include a steerable light beam transmitter in the device of Gfeller in order to enhance tracking capabilities via 360 degree motion (column 5 lines 1-11 of Solinsky). Furthermore, one skilled in the art would have been motivated to prevent the wireless optical link from locking on to a reflected light beam originating from its steerable light beam transmitter in order to reduce the effects of crosstalk (column 3 lines 24-34 of Solinsky). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a steerable light beam transmitter and preventing the wireless optical link from locking on to a reflected light beam originating from its steerable light beam transmitter as taught by Solinsky in the device of Gfeller.

Regarding claim 2, Gfeller teaches the step of appending a unique identifier to data being transmitted on the light beam prior to transmission (e.g. "Origin Address" of column 4 lines 1-11).

Regarding claim 3, Gfeller teaches that the unique identifier is a network address of the optical wireless link transmitting the data (e.g. "Origin Address" of column 4 lines 1-11).

Regarding claim 4, Gfeller teaches that the network address is unique to the optical wireless link (inherent).

Regarding claim 5, Gfeller teaches that the unique identifier is a uniquely calculated data value that is ensured of being unique to the optical wireless link transmitting the data (inherent).

Regarding claim 6, Gfeller teaches that the parsing step comprises searching for the presence of the unique identifier in the demodulated data (reference numeral 51, 53 in Figure 7) .

Regarding claim 7, Gfeller teaches that the determining step comprises: finding that the origin is different from the steerable light beam if the unique identifier is absent from the demodulated data (e.g. if the unique identifier is absent, then comparator 69 in Figure 7 will not produce a match); and finding that the origin is the same as the steerable light beam if the unique identifier is present in the demodulated data (e.g. if the unique identifier is present, then comparator 69 in Figure 7 will produce a match when they are the same).

Regarding claim 8, Gfeller teaches the step of monitoring data transmitted on the light beam prior to transmission (reference numeral 29 in Figure 7).

Regarding claim 9, Gfeller teaches that the parsing step comprises comparing the demodulated data with the monitored data (reference numeral 69 in Figure 7).

Regarding claim 10, Gfeller teaches that finding that the origin is different from the steerable light beam if the demodulated data and the monitored data are different (e.g. do not match reference numeral 79 in Figure 7); and finding that the origin is the same as the steerable light beam if the demodulated data and the monitored data are the same (e.g. do match reference numeral 79 in Figure 7).

Regarding claim 11, Gfeller teaches the step of ignoring the received light beam (e.g. no output from buffer 55 in Figure 7) if the origin of the demodulated data was the same as steerable light beam, subsequent to the determining step.

Regarding claim 12, Gfeller differs from the claimed invention in that Gfeller fails to specifically teach retrieving positional data from the demodulated data; transmitting the positional data on a second light beam; and aligning the light transmitter to the positional data received from the demodulated data. However, Solinsky, in the same field of satellite communication, teaches that this concept is well known in the art (see abstract of Solinsky). One skilled in the art would have been motivated to retrieve positional data from the demodulated data; transmit the positional data on a second light beam; and align the light transmitter to the positional data received from the demodulated data in order to improve acquisition and tracking of optical beams communication between two satellites. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to retrieve positional data from the demodulated data; transmit the positional data on a second light beam; and align the light transmitter to the positional data received from the demodulated data in order to improve acquisition and tracking of optical beams communication between two satellites.

Regarding claim 13, Gfeller teaches a light beam transmitter (reference numeral 19 in Figure 7) configured to transmit a first light beam; a photodetector (reference numeral 48 in Figure 7) configured to receive a second light beam; and a processing element (reference numeral 23, 51, 53, 65, 67, 69 in Figure 7) coupled to the light beam transmitter and the photodetector, the processing element containing circuitry to detect the origin of data received on the second light beam, a reflection detection unit (reference numeral 49, 51, 53, 65, 69, and 71 in Figure 7) coupled to the photodetector, the reflection detection unit containing circuitry to detect the origin of the data received on the second light beam, and a memory (reference numeral 55 in Figure 7) coupled to the reflection detection unit, the memory to store the received data. Gfeller

differs from the claimed invention in that Gfeller fails to specifically teach providing a steerable light beam transmitter and that the wireless optical link is prevented from locking on to a reflected light beam originating from its steerable light beam transmitter. However, Solinsky, in the same field of satellite communication, teaches that steerable light beam transmitters are well known in the art (reference numeral 12a in Figure 1) and further that the wireless optical link is prevented from locking on to a reflected light beam originating from its steerable light beam transmitter (column 8 lines 1-52). One skilled in the art would have been motivated to include a steerable light beam transmitter in the device of Gfeller in order to enhance tracking capabilities via 360 degree motion (column 5 lines 1-11 of Solinsky). Furthermore, one skilled in the art would have been motivated to prevent the wireless optical link from locking on to a reflected light beam originating from its steerable light beam transmitter in order to reduce the effects of crosstalk (column 3 lines 24-34 of Solinsky). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide a steerable light beam transmitter and preventing the wireless optical link from locking on to a reflected light beam originating from its steerable light beam transmitter as taught by Solinsky in the device of Gfeller.

Regarding claim 15, Gfeller teaches that the memory (reference numeral 65 in Figure 7) further stores a unique identifier used to detect the origin of the received data.

Regarding claim 16, Gfeller teaches that the memory further stores monitored data (reference numeral 67 in Figure 7) from transmissions originating from the optical wireless link.

Regarding claim 17, Gfeller teaches a reflection detection unit (reference numeral 51 in Figure 7) coupled to the photodetector, the reflection detection unit containing circuitry to detect

the origin of the data received on the second light beam; and a memory (reference numeral 65 in Figure 7) coupled to the reflection detection unit, the memory to store the received data.

Regarding claim 18, Gfeller differs from the claimed invention in that Gfeller fails to specifically teach that the first light beam is steered by a controllable mirror. However, However, Solinsky, in the same field of satellite communication, teaches that this concept is well known in the art (Figure 3 of Solinsky). One skilled in the art would have been motivated to include a controllable mirror in the device of Gfeller in order to generate a predetermined scan pattern. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include a controllable mirror as taught by Solinsky in the device of Gfeller.

Response to Arguments

4. Applicant's arguments with respect to claims 1-13 and 15-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Bello

AGUSTIN BELLO
PRIMARY EXAMINER